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Chapter 1 Background

The Commercial Driver's License (CDL) Program was established in 1986 under the Commercial Motor Vehicle Safety Act (CMVSA) of 1986. The purpose was to improve highway safety by ensuring that drivers of large trucks and buses are qualified to operate those vehicles and to remove unsafe and unqualified drivers from the highways. The CMVSA requires all drivers operating motor freight vehicles with gross vehicle weights (GVW) of 26,000 pounds or more, as well as those transporting hazardous materials or carrying 15 or more persons for commercial purposes (without regard for GVW), to acquire a CDL. Along with the CDL Program's implementation, the CMVSA established the Commercial Driver's License Information System (CDLIS) to serve as a clearinghouse and repository of commercial driver licensing and conviction data among the states. Using CDLIS, states can check the records of commercial drivers so as to assure that drivers convicted of certain serious traffic violations (as defined by the Federal Motor Carrier Safety Regulations (FMCSRs)) be prohibited from operating a commercial motor vehicle (CMV) in interstate transportation.

In 1999, Congress passed the Motor Carrier Safety Improvement Act (MCSIA) of 1999 to build upon the progress made under the CMVSA of 1986. The MCSIA includes language amending several provisions in Title 49 of the United States Code related to the licensing and sanctioning of CMV drivers required to hold a CDL. It also directed the U.S. Department of Transportation (US DOT) to amend its regulations to correct specific vulnerabilities within the CDL Program.

This regulatory evaluation addresses six of the provisions contained in the Notice of Proposed Rulemaking (NPRM) for the MCSIA legislation, primarily those provisions that FMCSA analysts expected would have economic costs to state government agencies and the motor carrier industry, albeit potentially "non-significant" according to Office of Management and Budget (OMB) guidelines (e.g., < \$100 million annually). These provisions include:

- Section 201A of MCSIA – Disqualification for Driving While Suspended, Disqualified and Causing a Fatality.

This provision creates two new Federal disqualifying offenses: (1) driving a CMV while revoked, suspended, or cancelled, or while the driver is disqualified based upon the driver's operation of a CMV; and (2) causing a fatality through the negligent or criminal operation of a CMV.

- Section 201 B of MCSIA - Emergency Disqualification of Drivers Posing an Imminent Hazard

This section directs the Secretary of Transportation (USDOT) to impose an emergency disqualification on drivers whose continued operation of a CMV the Secretary determines would constitute an imminent hazard. In cases where the

Secretary proposes emergency disqualification beyond 30 days, the driver must be notified of the proposed action and provided the opportunity for a hearing.

- Section 201 C of MCSIA - Expanded Definition of Serious Traffic Violations

This section adds three new offenses to the FMCSR definition of serious traffic violations. These new violations include: (1) driving a CMV when the driver has not obtained a CDL; (2) driving a CMV without a CDL in the driver's possession; and (3) driving a CMV without the driver having met the minimum testing standards for the specific class of CMV being operated, or for the type of cargo being transported on the vehicle.

- Section 202 A of MCSIA – Expanded Driver Record Check

This section expands the record check States are currently required to make of a CDL applicant's driving record before issuing a CDL. This includes the state from which the driver may have been issued a CDL to any state where the applicant may have received any type of driver's license. It also requires that a record check be made whenever a CDL holder renews his or her license.

- Section 202 B of MCSIA – New Notification Requirements

This section requires states to notify CDLIS and the state that issued the CDL no later than 10 days after disqualifying a CDL holder from operating a CMV (or revoking, suspending, or canceling a CDL) for at least 60 days. This notification must include the violation that resulted in the disqualification, revocation, suspension, or cancellation recorded on the driver's record.

- Section 202 G of MCSIA – Masking Prohibition

This section of MCSIA prohibits the practice of masking convictions and thereby requires the record to be maintained or transmitted to the state where the driver is licensed. This provision also requires that records of such conviction information be made available to all authorized parties and government entities.

As stated, this regulatory evaluation addresses six "major" provisions of the NPRM. Although the remaining nine provisions were initially examined, FMCSA analysts determined through a preliminary evaluation that these nine, identified and discussed in Appendix A, would not impose significant economic costs on state government agencies, or the motor carrier industry. For a full explanation, see Appendix A.

The FMCSA analysts derived benefits estimates for this rule by examining the number of truck-related crashes, using average costs for various types (e.g., fatal, injury, and property-damage-only (PDO)), that must be avoided over the analysis period (2003-2011) for this rule to be cost effective. Note that no crash reduction is assumed to occur

during the first year of implementation (2002). Results of this analysis are contained in Table 1.

Table 1
Summary of NPRM Costs and Other Relevant Factors

Net Present Value of Costs, 2002-2011	\$285 million	
Net Present Value of Benefits if 500 Truck-Related Crashes are Avoided Annually between 2003-2011	\$288.5 million	
Type of Truck-Related Crash	Average Cost per Crash ¹	Annual Reduction Required ²
Fatal Crashes involving "Large Trucks"	\$3,419,202	5
Injury-Related "Large Truck" Crashes	\$217,000	105
Property-Damage-Only "Large Truck" Crashes	\$11,300	390
¹ From "Cost of Large-Truck and Bus-Involved Crashes, Final Report for the Federal Motor Carrier Safety Administration, Zaloshnja, Miller, & Spicer, 2000. ² For discounted benefits of the rule to exceed discounted costs, a total of 500 truck-related crashes (e.g., fatal, injury, & PDO combined) must be avoided annually during the last nine years of the analysis period (2003-2011). This reduction represents roughly 0.1 percent (or 1/10 of 1 percent) of the total number of reported truck-related crashes annually.		

The results of Table 1 are discussed in detail in Chapters Two and Three of this document. Chapter Two outlines the costs of this rule, while Chapter Three discusses the potential benefits, or alternatively, the number of crashes that must be avoided if this rule is to be cost effective (e.g., where discounted benefits exceed discounted costs). The data used to estimate the average cost per truck-related crash is also discussed.

Chapter 2

Costs

Six provisions contained within this NPRM were analyzed. Each is represented here by the MCSIA section number and the title contained within the NPRM. They include:

- Section 201(a), “Disqualification for Driving While Suspended, Disqualified and Causing a Fatality”;
- Section 201(b), “Emergency Disqualification of Drivers Posing an Imminent Hazard”;
- Section 201(c), “Expanded Definition of Serious Traffic Violations”;
- Section 202(a), “Expanded Driver Record Check”; Section 202(b), “New Notification Requirements”;
- Section 202 (b), “New Notification Requirements; and
- Section 202(g), “Masking Prohibition”.

The six individual provisions analyzed here address several unique aspects of the CDL program, and as a result, their costs vary considerably. Some costs impact CDL drivers most directly (via suspensions, disqualifications, etc.) while others primarily impact state government management and enforcement of the CDL program. The total discounted costs from each provision’s implementation are included in Table 2.

Table 2. Total Discounted Costs, by MCSIA Section and Title		
MCSIA Section	NPRM Section Title	Total Discounted Costs (millions of discounted dollars)
201a	“...Driving While Suspended...”	\$89.1
201b	“...Imminent Hazard”	\$19.7
201c	“Expanded Definition of Serious Traffic Violations”	\$45.2
202a	“Expanded Driver Record Check”	\$104.9
202b	“New Notification Requirements”	\$3.8
202g	“Masking Prohibition”	\$22.2
Total	All Six Provisions	\$284.9

While the costs associated with each provision are somewhat unique, the types of costs generally fall into one of two categories:

Start-Up, or First Year Costs: These costs include information system, or computer, costs incurred by Federal and state government agencies to effectively implement the new CDL program provisions under MCSIA. Specific examples include those costs required to establish or modify computer systems within each state to log, review, and transfer the new serious traffic violations identified under MCSIA. Additionally, these costs include information systems costs to implement the new notification requirements for states under MCSIA. Such costs include hardware, software, and personnel costs to establish or modify computer systems within each state. Estimates of the start-up, or first-year, costs were primarily adapted from information compiled in Fall, 2000, by

AAMVAnet, a subsidiary of the American Association of Motor Vehicle Administrators that establishes and manages information technology devices for states, such as the Commercial Drivers License Information System (CDLIS), to exchange driver and vehicle information related to the CDL program. The AAMVAnet staff had independently queried its member states on the expected information system budget impacts of the MCSIA legislation. FMCSA found this data extremely useful in estimating the first-year system development and implementation costs of MCSIA provisions. Results are contained in Table 3.

Table 3. Total “First-Year” Costs of NPRM Provisions, by MCSIA Section		
MCSIA Section	NPRM Section Title	Total First-Year Costs (millions of discounted dollars)
201a	“...Driving While Suspended...”	\$1.61
201b	“...Imminent Hazard”	\$2.15
201c	“Expanded Definition of Serious Traffic Violations”	\$1.41
202a	“Expanded Driver Record Check”	\$1.46 ¹
202b	“New Notification Requirements”	\$0.58 ¹
202g	“Masking Prohibition”	\$5.12 ²
Total		\$12.3
¹ Information system implementation costs were spread over three calendar years.		
² Includes information system implementation costs, state labor costs to collect, input, and transmit CDL data, and wage reduction costs to disqualified CDL holders.		

Ongoing, or Later Year, Costs: These include the annual costs incurred by Federal and state government agencies to administer the new programs established by MCSIA. Such costs include, for example, staff time to input new CDL data into state systems and transfer to CDLIS, staff time to check CDL driver records for new serious traffic violations, and additional staff required to help states meet the new CDL driver violation notification requirements. Most importantly, this category includes the wage reduction costs incurred by CDL drivers who are suspended/disqualified as a result of the new CDL provisions under MCSIA that expand the number of serious traffic violations, prohibit masking of drivers’ first convictions by state courts, and the Imminent Hazard designation. Results are contained in Table 4.

Table 4. Total “Later-Year” Costs of NPRM, by MCSIA Section		
MCSIA Section	NPRM Section Title	Total Later-Year Costs (millions of discounted dollars)
201a	“...Driving While Suspended...”	\$87.5
201b	“...Imminent Hazard”	\$17.6
201c	“Expanded Definition of Serious Traffic Violations”	\$43.8
202a	“Expanded Driver Record Check”	\$103.4
202b	“New Notification Requirements”	\$3.2

202g	"Masking Prohibition"	\$17.1
Total		\$272.6

Each of the six major provisions examined is analyzed separately here, since many of the annual or ongoing costs of the provisions are somewhat unique (e.g., effects on driver suspensions and disqualifications.)

Section 201A of MCSIA – Disqualification for Driving While Suspended, Disqualified and Causing a Fatality.

This provision creates two new disqualifying offenses under the Federal Motor Carrier Safety Regulations (FMCSR). They are: (1) driving a CMV while revoked, suspended, or cancelled, or while the driver is disqualified based upon the driver's operation of a CMV; and (2) causing a fatality through the negligent or criminal operation of a CMV. As such, the number of disqualifying offenses under the FMCSRs will increase from five to seven. First-year costs include information system development and implementation costs. Annual costs thereafter include additional data entry by state government staff (e.g., to key new disqualifying offenses into CDL records), and more importantly, new driver disqualifications resulting from new FMCSR offenses.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is assumed that the provisions of MCSIA Section 201(a) will be fully implemented by states in calendar year 2005. As such, implementation costs are assumed to occur in 2004 and are discounted appropriately (using Office of Management and Budget (OMB) guidelines). As stated earlier, system development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 201(a) of the MCSIA legislation, nine states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement each provision. Costs for Section 201(a) totaled \$326,106 for the nine responding states. As such, the average cost per state is \$36,234. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 201(a) of MCSIA equals \$1.85 million in calendar year 2004, but equal \$1.61 million when discounted to the year 2002 (when the rule is presumed to be finalized). Although it was not stated in the survey results, it is assumed the state respondents calculated these estimates in conjunction with system development and implementation costs for 12 other sections of the MCSIA legislation. As such, FMCSA analysts assume these state estimates have incorporated economies of scale benefits (e.g., in terms of cost reductions) by implementing all aspects of the relevant MCSIA provisions simultaneously.

ANNUAL, LATER-YEAR COSTS

New Disqualifying Offense: Driving a CMV While Revoked, Suspended, or Cancelled...

Annual, or later-year costs represent the vast majority of industry costs from this provision. While the number of disqualifying offenses under the FMCSRs will increase by 40 percent (from five to seven), the actual number of CDL driver withdrawals is not expected to increase by nearly this much. Using 1992-1996 CDLIS data for the FMCSA CDL Effectiveness Study (1999) as a baseline, TML Services estimated that there were approximately 38,643 CDL withdrawals in calendar year 2000 due to the FMCSRs. The FMCSA expects only a portion of these 38,643 drivers to violate the new provision of "driving a CMV while revoked, suspended, or cancelled." Using March, 1997, data from the CDL Effectiveness Study database, TML services indicates, "11.3 percent of the CMV operators checked against CDLIS using FHWA's ASPEN and CAPRI software did not have the required, valid, current CDL." (page 10, Volume 1.) As such, the FMCSA assumes 10 percent (or 3,864) CDL drivers will violate the new provision and will be subsequently receive disqualifications of one year on average (or 2080 working hours). With national unemployment rates currently at 4.2 percent (January, 2001) and forecast to remain in the 4-5 percent range for the foreseeable future, and the industry shortage of drivers currently estimated at approximately 80,000, these same drivers are assumed to secure alternative employment immediately, albeit at a wage rate assumed to be 10 percent below what they earned as a CDL driver. This 10-percent reduction in wages is assumed to disappear when the disqualification period ends (as the CDL holder is assumed to resume CMV operation at that time).

New Disqualifying Offense: Causing a Fatality through Negligent or Criminal Operation of a CMV

Violation of the second new offense (e.g., causing a fatality through negligent or criminal operation of a CMV), is very serious, and a much less-likely event than other, current disqualifying offenses (e.g., driving a commercial motor vehicle while under the influence of alcohol.) As such, FMCSA analysts would expect only a small number of drivers to be disqualified for this offense. Data from "Trends in Motor Vehicle Crashes" (FMCSA, December, 2000) indicates that there were 4,542 fatal crashes involving large trucks in 1999. Of these, 82.2 percent or 3,734 involved two or more motor vehicles (unpublished FMCSA information from 1999 FARS data base). Of these 3,734, FMCSA assumed that 432 (or 11.5 percent) of the CMV operators involved in these crashes would be disqualified under the new provision of "Causing a Fatality through negligent or criminal operation." Data from "Driver-Related Factors in Crashes Between Large Trucks and Passenger Vehicles" (FMCSA Analysis Brief, April 1999) indicates that in 16 percent of Fatal Crashes involving trucks, police reported, "one or more errors or other factors related to the driver's behavior" by the CMV driver and none by the other (Non-CMV) driver. To be conservative, FMCSA analysts assumed only 11.5 percent, or 432 would be disqualified as a result.

Combining total new CDL driver disqualifications resulting from new Section 201(a) provision, 4,296 new CDL drivers are estimated to receive disqualifications annually. It is assumed that each driver will be disqualified for an average of one year (2080 working

hours), although each accepts alternative employment immediately, but at a real wage rate equal to 10 percent less than that received previously as a CDL driver. Wage data for truck drivers was obtained from the U.S. Department of Labor, Bureau of Labor Statistic's "Median Weekly Earnings" data for 1999. Wage rates used here were increased 20 percent to account for employee fringe benefits (e.g., health insurance, etc.).

Costs for Data Entry and Data Checks by State Staff

These costs are relatively small, but include the cost for state staff to enter CDL driver conviction information into that driver's CDL record. Additionally, during each CDL driver roadside inspection, it is assumed that each CDL driver's record is checked by the patrolman. It is assumed that each violation takes 6 minutes to enter and each CDL record check takes 6 minutes (per record). Assuming an hourly wage rate of \$19.70 for a patrolman and \$12.66 for a data entry clerk (1999 Bureau of Labor Statistics data plus 20% added for fringe benefits) and 2.3 million CDL convictions per year (FMCSA data), data entry costs of new CDL driver convictions and data checks during roadside inspections total about \$450,000 (undiscounted) annually for the period 2005 through 2011.

Total Costs of Section 201(a)

Total first-year costs of implementing Section 201(a) of MCSIA equal \$1.61 million for all 50 states and Washington, D.C. Discounted costs (using a 7-percent discount rate) thereafter equal approximately \$87.5 million, for the period 2005 through 2011. Therefore, the present value of total costs for Section 201(a) of MCSIA are \$89.1 million.

Section 201(B) of MCSIA - Emergency Disqualification of Drivers Posing an Imminent Hazard

This section provides the Secretary of the U.S. Department of Transportation (USDOT) the ability to impose an emergency disqualification on drivers whose continued operation of a CMV the Secretary determines would constitute an imminent hazard. In cases where the Secretary proposes emergency disqualification beyond 30 days, the driver must be notified of the proposed action and provided the opportunity for a hearing. This provision may enhance roadway safety by keeping a driver who has been charged with a disqualifying offense (but who has not yet been convicted) from operating a CMV while the case is pending. It is assumed that all charges would take at least 30 days to be reviewed, so it is assumed that all Imminent Hazard (IH) designations imposed by the USDOT Secretary will provide the offer of a court hearing and that all charged drivers would request such a hearing.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is assumed that the “Imminent Hazard” or IH provision will be fully implemented in calendar year 2004 (since it is primarily a Federal initiative). As such, implementation costs are assumed to occur in 2003 and are discounted appropriately (using Office of Management and Budget (OMB) guidelines to the year 2002 (presumed first year of this rule’s implementation). As stated earlier, system development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 201(b) of the MCSIA legislation, 12 states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement each provision. Costs for Section 201(b) totaled \$541,592 for the 12 responding states. As such, the average cost per state is \$45,133. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 201(b) of MCSIA equals \$2.3 million in calendar year 2003, but equal \$2.15 million when discounted to the year 2002.

ANNUAL COSTS

Annual, or ongoing, costs are assumed to begin occurring in calendar year 2004. Costs calculated for this provision include: (a) costs to review CDL drivers’ records for IH designation; (b) costs to hold hearings for each driver when an IH designation is assigned to a CDL driver; (c) costs to CDL drivers who are given the IH designation; and (d) data entry costs for state employees where the IH designation is applied.

Costs to Review CDL Driver Records when Considering IH Designation and Costs to Hold Driver Hearings

These costs are assumed to be primarily Federal and state costs because Federal and state employees will prepare a driver’s case file for review by the USDOT Secretary.

Although no specific guidance was provided in the MCSIA legislation as to exactly when the IH designation should be considered, Federal CDL Program staff indicated that the IH designation would only be considered in the most serious cases, presumably only in two-vehicle fatal crashes where the CDL driver might have somehow exhibited behavior that contributed to the crash. As such, FMCSA analysts would expect only a small number of drivers to be disqualified for this offense. Data from “Trends in Motor Vehicle Crashes” (FMCSA, December, 2000) indicates that there were 4,542 fatal crashes involving large trucks in 1999. Of these, 82.2 percent or 3,734, involved two or more motor vehicles (unpublished FMCSA information from 1999 FARS data base). Data from “Driver-Related Factors in Crashes Between Large Trucks and Passenger Vehicles” (FMCSA Analysis Brief, April 1999) indicates that in 16 percent of Fatal Crashes involving trucks, police reported, “one or more errors or other factors related to the driver’s behavior” by the CMV driver and none by the other (Non-CMV) driver. As such, FMCSA analysts assumed that 597 CDL holders would receive a hearing under the “Imminent Hazard” designation in any given year during this rule’s implementation. Of these, FMCSA

analysts assumed that 50 percent, or 299 CDL holders, would retain the “IH” status as a result of the hearing (and half the hearings would dismiss the “IH” status).

Cost to Drivers Who Receive IH Designation

The primary costs here relate to reductions in a driver’s wages if he or she is given the IH designation by the USDOT Secretary. An IH designation extends the disqualification period for a driver, since IH status would presumably cover the period between the time of the violation citation and the date of conviction (after the conviction, the driver would have been disqualified anyway.) FMCSA staff assumes that the IH designation period for a CDL driver is, on average, three months (or 520 working hours.) During this period, it is assumed that the driver will obtain alternative employment (e.g., outside of CDL driving duties) but at a wage 10 percent lower than that secured as a CDL driver. Using 1999 BLS data on “Median Weekly Earnings” data for 1999, a truck driver’s wage is assumed to be \$15.82 per hour (including a 20 percent increase to account for employee fringe benefits).

Federal IH Review and Hearing Costs

These costs include Federal legal costs to review cases for hearings. Wage rates are assumed to be \$35 per hour for Federal attorneys on average (from the 1999 BLS “Median Weekly Earnings”), reviews are assumed to require 40 hours of work per case, and as noted earlier, 597 cases are expected to be reviewed each year. Additionally, costs to conduct 597 hearings should be considered. These costs include labor costs for a Federal judge, a defense attorney, and the CDL holder, all of whom are expected to spend approximately 40 hours of “active” time on each case, at hourly wage rates calculated from the BLS (e.g., \$36 per hour for judge, \$35 per hour for attorney, and \$16 per hour for driver.)

Total Costs from Section 201(b)

Total first-year costs in 2003 from implementing Section 201(b) of MCSIA, “Imminent Hazard” Designation, equal approximately \$2.15 million (in present value dollars) for all 50 states and Washington, D.C. Discounted “later year” costs (using OMB-prescribed seven percent discount rate) total \$17.6 million, for the period 2004 through 2011. Therefore, present value costs of Section 201(b) of MCSIA total \$19.7 million.

Section 201 C of MCSIA - Expanded Definition of Serious Traffic Violations

This section adds three new offenses to the FMCSR definition of serious traffic violations. These new violations include: (1) driving a CMV when the driver has not obtained a CDL; (2) driving a CMV without a CDL in the driver’s possession; and (3) driving a CMV without the driver having met the minimum testing standards for the specific class of CMV being operated, or for the type of cargo being transported on the

vehicle. Adding these three new violations increase the total number of serious traffic violations, as defined in Part 383 of the FMCSRs, from five to eight.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is expected that the new “Serious Traffic Violations” provision could be implemented in calendar year 2003. As such, implementation costs are assumed to occur in 2003 and are discounted appropriately (using an OMB-prescribed discount rate of 7 percent) to 2002. System development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 201(c) of the MCSIA legislation, 11 states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement this provision. Costs for Section 201(c) totaled \$326,078 for the 11 responding states. As such, the average cost per state is \$29,643. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 201(c) of MCSIA equals \$1.51 million in calendar year 2003, but equal \$1.41 million when discounted to 2002.

ANNUAL COSTS

Annual, or ongoing, costs are assumed to begin occurring in calendar year 2004. Annual costs calculated for this provision include: (a) costs to patrolmen to write the convictions for 3 new serious traffic violation offenses; (b) costs to input the new conviction data into CDL drivers’ records and report disqualifying information to CDLIS; and (c) costs to CDL drivers who will be disqualified as a result of the 3 new serious traffic violations.

Costs to Write New Convictions

Records from the 1999 Motor Carrier Safety Assistance Program (MCSAP) Quarterly Report indicate that there was approximately 2.2-million truck inspection in 1999. Using March 1997, data from the CDL Effectiveness Study database, TML services estimated that “11.3 percent of the CMV operators checked against CDLIS using FHWA’s ASPEN and CAPRI software did not have the required, valid, current CDL.” (page 10, Volume 1.) As such, the FMCSA assumes that 11.3 percent of the 2.2 million (or about 250,000) will have a CDL status “other than valid.” As a result, state patrolmen will now write an additional 250,000 citations for the new serious traffic violations identified in this provision. Assuming a patrolman’s hourly wage rate is \$19.07 (including fringe benefits) and 15 minutes spent per citation, the undiscounted annual cost is approximately \$1.23 million per year. One must also add the labor cost for state employees to enter the new conviction data into their information systems and transmit the data to CDLIS. Assuming 250,000 new convictions annually, 15 minutes spent inputting and transmitting each CDL conviction record, and an hourly wage rate of 12.66 (including fringe benefits) for state

data entry workers, and the additional cost per year is approximately \$800,000 (undiscounted).

Costs resulting from Additional CDL Holder Withdrawals

Data analysis from the 1999 CDL Effectiveness Study indicates that there were 47,186 CDL withdrawals for FMCSR-defined serious traffic violations during the study period 1992-1996. This translates to an annual average of 11,797 CDL withdrawals for the five FMCSR-defined serious traffic violations, or 2,259 per serious traffic violation. Adding three new FMCSR-defined serious traffic violations would result in an additional 7,077 CDL withdrawals per year. Two convictions of FMCSR-defined serious traffic violations (e.g., excessive speeding, 15 mph over speed limit) within a three-year period carries a disqualification period of 60 days, while three convictions within a three-year period carries 120 days, with a midpoint of 90 days (e.g., 3 months or 520 hours, assuming a 40-hour workweek). As such, FMCSA analysts assumed an average disqualification period of three months, or 520 work hours. Also, an hourly wage rate of \$15.82 for truck drivers (from 1999 BLS “Median Weekly Wages”) was assumed. Total costs as a result of these new disqualifications equals \$5.8 million (undiscounted) annually.

Total Costs from Section 201(c)

Total first-year costs in 2002 from implementing Section 201(c) of MCSIA, “Expanding Definition of Serious Traffic Violations”, equal approximately \$1.41 million (in present value dollars) for all 50 states and Washington, D.C. Discounted “later year” costs (using OMB-prescribed seven percent discount rate) total \$43.8 million, for the period 2004 through 2011. Therefore, present value costs of Section 201(c) of MCSIA total \$45.2 million.

Section 202 A of MCSIA – Expanded Driver Record Check

This section expands the record check States are currently required to make of a CDL applicant’s driving record before issuing a CDL. This includes the state from which the driver may have been issued a CDL to any state where the applicant may have received any type of driver’s license (e.g., non-CDL). It also requires that a record check be made whenever a CDL holder renews his or her license. As such, FMCSA analysts expect a sizable portion of the implementation costs of this provision to include modifications to the National Driver Register (NDR) or development of a similar, alternative system used for interstate checks of non-CDL license suspensions. The NDR currently provides for interstate checks of driver’s license suspensions, but does not provide the ability to link conviction data with the suspension status. Such changes would be required in order for the NDR to meet the requirements of this MCSIA section.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is expected that states would begin implementing the new “Expanded Driver Record Check” provision towards the end of calendar year 2002. However, full implementation is assumed to take three years (through 2004), since, according to FMCSA and AAMVAnet program staff, NDR changes would “take time and dollars”. As such, estimates of “first year” costs provided by the states actually split equally into three years (2002-2004) and discounted where appropriate (using an OMB-prescribed discount rate of 7 percent) back to 2002. System development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 202(a) of the MCSIA legislation, eight states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement this provision. Costs for Section 202(a) totaled \$688,499 for the eight responding states. As such, the average cost per state is \$86,062. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 202(a) of MCSIA equals \$4.4 million. However, as stated, implementation is expected to occur over three years, so the first year cost is expected to be \$1.5 million in 2002. It was unclear whether the states responding to the AAMVAnet survey included any costs to modify the NDR in their figures. FMCSA analysts did not include any NDR cost estimates in the first year of implementation, but did assume costs to maintain the system for CDL holders in later years of implementation.

ANNUAL COSTS

Annual, or ongoing, costs are assumed to begin occurring in calendar year 2005 and include: (a) costs to maintain non-CDL records of a CDL holder (in a CDLIS-type system or modified NDR); (b) state employee costs to check the non-CDL record of a CDL holder during renewal and new application for a CDL license; and (c) wage reduction costs to CDL holders, and new applicants, who are rejected during the CDL renewal or initial application process.

Costs to maintain non-CDL records of a CDL Holder in a CDLIS-type System

The AAMVAnet staff indicated that it costs roughly \$1 per year for each CDL holder’s record to be maintained on CDLIS. It is assumed that establishing and maintaining a modified NDR similar to the CDLIS approach would result in similar year-to-year costs. Assuming 5.75 million active CDL records (e.g., a midpoint estimate between 3.2 million “active” CDL records estimated by the FMCSA Alcohol & Drug Survey and the 8.3 million records AAMVA estimated it had on record in 1997), such a system would cost roughly \$5.75 million annually to maintain over the analysis period.

Costs to Check Non-CMV Driving Record of a CDL Holder

Although the valid period of a CDL differs from state to state, FMCSA estimates that the average life of a CDL is five years, at which time it must be renewed. Assuming 5.75 million current, active CDL drivers, this results in 1,150,000 CDL renewals performed annually. Assuming a turnaround time of six minutes per search of a CDL holders' non-CMV driving record, and an average hourly wage rate of \$12.66 per state employee, total (undiscounted) costs to check the records of CDL holders during renewals is approximately \$1.5 million per year.

The AAMVAnet staff estimates roughly 40,000 new CDL records are added to CDLIS per month. Extrapolating to 12 months and rounding up, it results in approximately 500,000 new CDL applicants per year. Assuming a six-minute turnaround time to check a each new applicant's non-CMV driving record prior to issuing a CDL, and an average hourly wage of \$12.66 per state employee, total costs for a New CDL check is approximately \$633,000 annually (undiscounted).

Wage Reduction Costs to Those CDL Holders Rejected during Renewal or Initial Application

As a conservative estimate, FMCSA analysts assumed that only one percent of the 1,650,000 annual CDL applicants (or 16,500) would be rejected as a result of the expanded CDL driver record check. Assume that each driver, on average, would be unable to renew their CDL, or apply for a new one, for three months (520 hours), and that each rejected CDL holder would secure alternative employment immediately, but at a wage rate equal to 10 percent less than which could be obtained as a CMV driver. Such assumptions would result in an annual (undiscounted) cost of approximately \$13.6 million.

Total Costs from Section 202(a)

Total first-year costs in 2002 from implementing Section 202(a) of MCSIA, "Expanded Driver Record Check", equal approximately \$1.46 million (in present value dollars) for all 50 states and Washington, D.C. Discounted "later year" costs (using OMB-prescribed seven percent discount rate) total \$103.4 million, for the period 2004 through 2011. Therefore, present value costs of Section 202(a) of MCSIA total \$104.9 million.

Section 202(b) of MCSIA – New Notification Requirements

This section requires states to notify CDLIS and the state that issued the CDL no later than 10 days after disqualifying a CDL holder from operating a CMV (or revoking, suspending, or canceling a CDL) for at least 60 days. This notification must include the violation that resulted in the disqualification, revocation, suspension, or cancellation recorded on the driver's record. The FMCSA has proposed a phase-in period for this provision, with all states required to meet a 30-day reporting requirement within three years of the effective date of this rulemaking, and to meet the 10-day reporting requirement within six years.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is expected that states would begin to implement the requirements of this provision in calendar year 2002. However, full implementation is assumed to take three years (through 2004), so “first year” costs are split over the first three years of implementation (2002-2004) and discounted where appropriate (using an OMB-prescribed discount rate of 7 percent) to the beginning of 2002. System development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 202(b) of the MCSIA legislation, seven states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement this provision. Costs for Section 202(b) totaled \$240,375 for the seven responding states. As such, the average cost is \$34,339 per state. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 202(b) of MCSIA of \$1.75 million. However, as stated, implementation costs are assumed to be incurred over three years, with costs divided equally among each year, for a total annual (undiscounted) cost of \$0.58 million for each of the three years.

ANNUAL COSTS

Annual, or ongoing, costs (e.g., those costs incurred after system implementation is completed and tested) are assumed to begin occurring in calendar year 2005. Annual costs calculated for this provision include the on-going costs to state government agencies to ensure that CDL convictions are consistently transferred within the 10-day window. Also included is a requirement for states to transmit specific conviction information with each driver disqualification record. The FMCSA analysts assume that this provision would not result in any new disqualifications, since it primarily addresses the amount of CDL holder information transmitted, and the speed with which CDL convictions are transferred from state courts to DMVs and CDLIS. As such, no new CDL disqualifications are assumed for this provision. As a result, the costs of this provision mainly involve additional personnel costs to states and are estimated to be relatively marginal (compared to other MCSIA sections analyzed here).

Costs to file convictions within the required 10-day period

It is assumed that 146,256 new Out-of-State (OOS) convictions will be transferred as a result of this provision. This estimate was taken from TML Information Services data on the estimated number of additional CDLIS transactions required to be sent electronically by MCSIA (over what is estimated to be currently transmitted). Assuming an average hourly wage rate of \$10.55 per state data-entry employee, and 15 minutes spent per record logging and transmitting violation data with the CDL disqualification record,

results in total annual costs of slightly less than \$400,000 (undiscounted). It should be noted here that the number of new OOS convictions to be transferred as a result of this provision could be considered conservative. However, some convictions related to this provision are assumed to occur under the “Non-CMV Offenses” provision (included in a separate NPRM), since this provision does require to states to report CDL convictions, whether or not they occurred in a CMV. As such, the estimate used here attempts to avoid double counting the number of new OOS convictions transferred.

Total Costs from Section 202(b)

Total first-year costs in 2002 from implementing Section 202(b) of MCSIA, “New Notification Requirements” equal approximately \$0.58 million (in present value dollars) for all 50 states and Washington, D.C. Discounted “later year” costs (using OMB-prescribed seven percent discount rate) total \$3.2 million, for the period 2005 through 2011. Therefore, present value costs of Section 202(b) of MCSIA total \$3.8 million.

Section 202(g) of MCSIA – Masking Prohibition

This section of MCSIA prohibits the practice of masking convictions and thereby requires the CDL record to be maintained or transmitted to the state where the driver is licensed. This provision also requires that records of such conviction information be made available to all authorized parties and government entities.

FIRST-YEAR, or START-UP, COSTS

Information System Development and Implementation Costs

It is expected that states would begin implementing the new “Masking Prohibition” provision in calendar year 2003. System development and implementation cost estimates used here were adapted from the Fall, 2000, AAMVAnet survey of its member states on the expected information system costs of the MCSIA legislation. In summary information, AAMVAnet indicates that for Section 202(g) of the MCSIA legislation, eight states provided cost estimates for information system development and implementation. These costs include hardware, software, and personnel costs to implement this provision. Costs for Section 202(g) totaled \$379,141 for the eight responding states. As such, the average cost per state is \$47,393. Extrapolating these results to all fifty states and the District of Columbia results in total system development and implementation costs of Section 202(a) of MCSIA equals \$2.42 million.

ANNUAL COSTS

Annual, or ongoing, costs are assumed to begin occurring in calendar year 2002, and are primarily comprised of wage reduction costs to those CDL holders who will now be disqualified because conviction information is being transmitted to their home states.

Wage Reduction Costs for new CDL Disqualifications

Comparing information from the CDL Effectiveness Study and the “Disqualifying Commercial Drivers Audit Report” by the Office of Inspector General, U.S. Department of Transportation, FMCSA analysts assumed 14 states currently mask CDL driver convictions. Assuming these states represent 28 percent (e.g., 14 states / 50 states) of the 233,370 out-of-service convictions estimated in the 1999 MCSAP Quarterly Report (11/2/99), these states masked 65,344 out-of-service convictions in 1999. Research data from TML Information Services indicates that 5.7 percent of all CDL withdrawals were for FMCSR offenses. As such, if these 14 states “unmask” 65,344 withdrawal convictions, then 3,725 new FMCSR-required CDL withdrawals could be expected to occur as a result of this provision’s implementation. Not knowing the specific reason for these withdrawals, FMCSA analysts assumed that the average disqualification period would be 90 days, or three months (e.g., the midpoint of the disqualification period for two and three convictions of FMCSR serious traffic violations within a three-year period). Additionally, assuming these drivers find alternative employment at an hourly wage rate equal to 10-percent less than that earned as a CMV operator, the annual cost (undiscounted) would be approximately \$3.1 million annually. The present value of these CDL withdrawal costs during the 2002-2011 period is approximately \$17.1 million.

Total Costs from Section 202(g)

Total first-year costs in 2002 from implementing Section 202(g) of MCSIA, “Masking Prohibition” are approximately \$5.12 million (in present value dollars) for all 50 states and Washington, D.C. Note that this total include system development and implementation costs as well as the first year of “annual” costs. Discounted “later year” costs (using OMB-prescribed seven percent discount rate) total \$17.1 million, for the period 2002 through 2011. Therefore, present value costs of Section 202(g) of MCSIA total \$22.2 million.

Chapter 3

Benefits:

Crashes Avoided for NPRM to be Cost Effective

The primary societal benefits expected from this rule are the truck-related crashes that one would expect to be avoided due to the additional CMV operators (CDL holders specifically) who will be suspended or disqualified for violation of the new disqualifying offenses and serious traffic violations covered under this proposed rule. It was not possible to estimate the specific number of truck-related crashes that would be avoided from implementing each provision of this rule, given that FMCSA analysts had no available data on the direct link between these specific FMCSR-defined offenses and truck-related crashes. However, FMCSA analysts did use cost data on truck-related crashes from Zaloshnja, Miller, and Spicer ("The Costs of Large Truck- and Bus-Involved Crashes," 2000) to derive an estimate of the total number of truck-related crashes that would have to be avoided per year (during the analysis period) for this rule to be cost effective (e.g., for discounted benefits to equal/exceed discounted costs). Zaloshnja, et al, estimate that the average cost of all police-reported crashes (e.g., fatal, injury, and property-damage-only (PDO) crashes) involving trucks with a gross weight rating of more than 10,000 pounds is \$75,637 (in 1999 dollars). The average cost of large truck crashes involving a fatality is \$3.42 million, \$217,000 for those involving injuries, and \$11,300 for PDO crashes. Using data from "Trends in Motor Vehicle Crashes" (FMCSA, December, 2000), it can be seen that fatal, injury, and PDO crashes accounted for one percent, 21 percent, and 78 percent of all large truck-related crashes, respectively, in 1999. As such, safety benefits of this proposed rule would exceed implementation costs if an average of 500 truck-related crashes are avoided annually over 2003-2011 analysis period. (Note: no crash reduction benefits are assumed to occur during the first year of implementation (2002), as a conservative assumption). The 500 large truck crashes avoided (mostly PDO crashes), represents just 0.1 percent (or 1/10th of 1 percent) of the total 452,542 truck-related crashes reported in 1999. Breaking this total down by type of truck-related crash, the proposed rule will be cost effective if just 5 fatal crashes, 105 injury-related crashes, and 390 PDO crashes are avoided each year. Due to the conservative assumptions made here regarding the number of CDL holders expected to be disqualified because of this NPRM (e.g., more optimistic assumptions regarding CDL disqualifications would raise the potential crash reduction expectation), FMCSA analysts believe such crash reduction estimates are achievable, making this rule likely to be cost-effective.

As support, the 31,897 annual CDL disqualifications can be examined more closely. Assume each CDL disqualification period averages three months, since the disqualification period is assumed to be 90 days in most cases. Also assume that each CDL holder drives an average of 65,261 miles per year. This estimate is considered conservative, since other research indicates that large truck operators may travel upwards of 100,000 miles per year. However, data from the 1999 Highway Statistics (Table VM-1) on the annual distance traveled in miles for combination trucks indicates that each vehicle averages 65,261 miles annually. Therefore, the reduction in total commercial

vehicle miles traveled (VMT) by this group is estimated at 520.4 million per year (e.g., $65,261 \times 31,897 \times 0.25$ (% of annual calendar days disqualified, on average)). Data from Wang, Knipling, and Blincoe (Journal of Transportation Statistics, May, 1999) indicates that the vehicle involvement rate in police-reported crashes for combination unit trucks is 225.52 per 100 million VMT. As such, from a static perspective, one could expect crashes involving combination trucks to be reduced by 1,176 per year from this rule. However, it is probably more realistic to assume that a sizable portion of these drivers' shipments would be picked up by other, existing CDL holders. If it is assumed that only one half of the initial crash reduction estimate is actually experienced, then 588 combination truck crashes are avoided each year from this rule. Even at 588 crashes avoided during the period 2003-2011 (again, no benefits are assumed in the first year), this rule is still cost-effective, with discounted benefits equaling \$317 million (or \$32 million more than total discounted costs of \$285 million over the 2002-2011 analysis period).

Appendix A: Justification for Not Evaluating the Economic Costs of Certain MCSIA Provisions

It has been determined through preliminary analysis that the following provisions would not have a significant economic impact to the industry or state government agencies.

- Section 103 C of MCSIA – Emergency Grants to States in Non-Compliance with CDL Requirements.

This provision authorizes FMCSA to provide states with emergency CDL grants to assist those states found to be out of compliance with the CDL requirements in Title 49, part 384, subpart B of the Code of Federal Regulations (CFR). This provision was not evaluated because available funds are subject to the annual appropriation by Congress, and to date, no funds have been yet appropriated. Additionally, this provision directs FMCSA to provide grants to states, and thus, would impose no new significant cost to state government agencies for their programs. Lastly, FMCSA staff indicated that, at present, only one state would be potentially eligible for such a grant.

- Section 103 E – Withholding MCSAP Funds from States in Non-Compliance with CDL Requirements

This section requires the FMCSA to withhold either MCSAP incentive grants, state highway trust funds, or both if the agency determines that state to be in substantial non-compliance with one or more of the CDL requirements. Federal CDL program staff indicates that there is only one state that would even be considered for such action presently, and it has been determined that the FMCSA is highly unlikely to take any such punitive action prior to undertaking other, more collaborative efforts to bring states into compliance. As such, there is no significant economic impact from this provision.

- Section 201 B – Serious Offenses Involving a Non-commercial Motor Vehicle

This provision is being addressed in a separate rulemaking.

- Section 202 D – Prohibition on Hardship License to Drivers Who Lose Base License

This section prohibits states from issuing a provisional or temporary hardship license to CDL drivers who have been disqualified or who have had their base license revoked, suspended, or canceled. Discussions with Federal CDL program and staff at the American Association of Motor Vehicle Administrators (AAMVA) indicate that this provision will not have a significant impact on states, since most states already discourage this practice.

- Section 202 E – Penalties for Violating Minimum Licensing Requirements

This section clarifies the responsibility of states for establishing and imposing appropriate civil and criminal penalties, consistent with provisions of these regulations, for CDL drivers who operate a CMV without an appropriate CDL or continue to drive after they have been disqualified or their license has been revoked, suspended, or cancelled. Since this is just clarifying language, it will not have a significant economic impact on states or industry.

- Section 203 – Decertification of state CDL Programs for Non-Compliance

This section of MCSIA requires the FMCSA to prohibit a state from issuing or renewing CDLs if the agency has determined that the state is in substantial non-compliance with the CDL licensing and sanctioning requirements of 49 CFR part 384, subpart B. Since this action will only be considered after other attempts have been made to bring a state into compliance with the CDL requirements, FMCSA staff with the CDL Program indicated that such sanctions would only be imposed in extreme cases, and only after more collaborative efforts have failed. As such, it will have no significant economic impact on states or industry.

- Section 208 – Definition of Imminent Hazard

This section simply revises the definition of imminent hazard. Since any economic impacts of the Imminent Hazard rule are being assessed under Section 201 B (“Emergency Disqualification for Drivers Posing Imminent Hazard”), this provision of MCSIA will have no significant economic impact on states or industry.

- Section 214 – School Bus Endorsement

This section creates a new school bus endorsement that CDL holders must obtain to operate a school bus. The new school bus endorsement will require applicants to pass both a knowledge and skills test to obtain the endorsement. All applicants for the school bus endorsement will have to meet the same knowledge and skills requirements as needed to obtain a passenger vehicle endorsement. However, states may substitute driving experience for the skill test requirement (so long as the driver also has a clean driving record.) This “grand fathering” provision will significantly limit the number of CDL applicants who would have to take a skills test. Additionally, many states already have established knowledge tests for school bus drivers that would serve as the basis for developing a separate school bus endorsement knowledge test. Lastly, in conversations with FMCSA program staff and officials of pupil transportation services associations, their understanding of the MCSIA language is that the school bus endorsement provision would serve as a separate endorsement from the current passenger vehicle endorsement. In other words, an individual seeking a school bus endorsement would simply substitute those

skill and knowledge testing requirements for the current passenger vehicle endorsement. As such, no significant economic impact is imposed on states or industry from this provision.

- Section 215 – Medical Certification

This change is being addressed in a separate rulemaking.